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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/765,939 | 01/19/2001 | Benjamin Glade Johnson | 7536.103 | 7573 |

21999 7590 12/23/2003

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EXAMINER

SCHAETZLE, KENNEDY

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3762

DATE MAILED: 12/23/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/765,939

Applicant(s)

JOHNSON ET AL.

Examiner

Kennedy Schaeztle

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 23-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 23-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 1-21 and 23-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation in claim 1 and other claims regarding the first, second, third and fourth electrical circuits each having a respective beat frequency is confusing. The examiner was under the impression that the beat frequency is created as a result of the interaction between circuits of differing frequencies (e.g., a first beat frequency is established between the first and second circuit paths, etc.). The claims as originally presented also gave this impression. It is therefore not clear if the applicants intended to recite that the first, second, third and fourth circuits have respective first, second, third and fourth beat frequencies, or if the recitation is an error in claim drafting. The examiner requests clarification and suggests employing the original claim language to avoid confusion on this matter.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1-9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGraw et al. (Pat. No. 6,560,487).
McGraw et al. disclose a first electrical circuit having a first current source (note col. 5, lines 50-57 and col. 34, lines 48-67), a first variable base frequency (note col. 6, lines 20-25 and 62-67, col. 35, lines 25-33), a first beat frequency (note col. 34, lines 60-63) and a first pair of treatment electrodes (note col. 3, lines 5-15).

Although McGraw et al. do not explicitly show an interferential current treatment apparatus comprising a third and a fourth electrical circuit as recited, it is taught by McGraw et al. that those of ordinary skill in the art would understand that the device may include any number of channels (col. 5, lines 60-64). Clearly the decision to employ additional circuits depends upon the patient's condition and area under treatment. To employ such circuitry to best suit the needs of the patient would have therefore been considered obvious by those of ordinary skill in the interferential treatment arts.

Regarding the recitation concerning beat frequency, the examiner is assuming the applicant was attempting to merely rephrase the original claim language (see the rejection under 35 USC § 112, 2nd paragraph above). The examiner will therefore consider any interferential circuit arrangement comprising multiple independent current sources, variable base frequencies, and treatment electrode pairs, to inherently produce the recited beat frequencies.

Regarding claim 2, McGraw et al. disclose means for adjusting the frequency of the independent current sources and thus the beat frequency (note Fig. 126, for example, and the touch-sensitive area marked "adjust" next to the reading of frequency, as well as the text references above).

Regarding claim 3, note col. 6, lines 20-24.

Regarding claim 4, note col. 6, lines 62-67 and col. 35, lines 25-33. While the specific frequency of 1850 Hz is not disclosed, the frequency of 1850 Hz is well-within the range of acceptable frequencies disclosed by McGraw et al.. Those of ordinary skill in the art would have seen the exact frequency of treatment to be an issue best determined by the physician and ultimately the needs of the patient under treatment.

Regarding claim 6, note Figs. 125, 126, 140, 144, etc. that show means for displaying frequencies and elapsed times.

Regarding claim 8, the current sources disclosed by McGraw et al. are alternating with a carrier frequency signal added thereto.

Regarding claims 20, 21 and 23-26, comments paralleling the rejection of claim 1 and claims with similar limitations as set forth above apply here as well.

Concerning claims 27 and 28, McGraw et al. disclose that the beat frequency may be variable and adjustable between 0 and 200 Hz (note col. 6, lines 20-38) and specifically recites the use of beat frequencies of 1-10 beats/second, up to a wide range of 1-150 beats/second. Again while the specific frequencies of 2-6 and 8-12 Hz are not explicitly disclosed, the frequencies are well-within the range of acceptable beat frequencies disclosed by McGraw et al.. Those of ordinary skill in the art would have seen the exact frequency of treatment to be an issue best determined by the physician and ultimately the needs of the patient under treatment.

Allowable Subject Matter

5. Claim 10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

There does not appear to be a teaching in the prior art of record for modifying the system of McGraw et al. to incorporate the recited third electrical circuit with a third base frequency greater than the first base frequency by at least 500 Hz, with the second base frequency being within 200 Hz of the first base frequency, and the fourth base frequency being no more than 200 Hz greater than the third base frequency.

6. Claims 11-19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1-21 and 23-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 3762

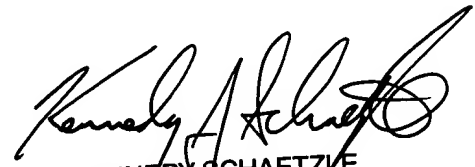
mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kennedy Schaetzle whose telephone number is 703 308-2211. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 703 308-5181. The fax phone number for the organization where this application or proceeding is assigned is 703 872-9302.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0858.

KJS
December 15, 2003



KENNEDY SCHAETZLE
PRIMARY EXAMINER